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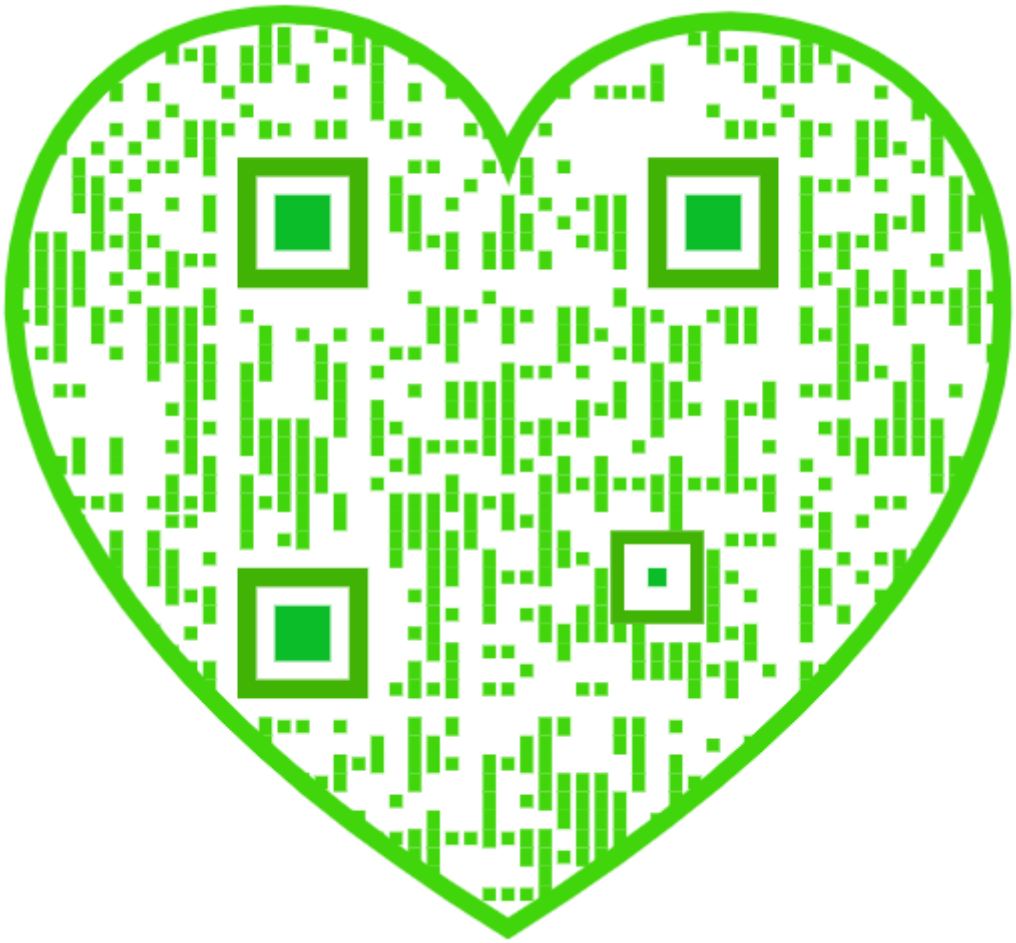
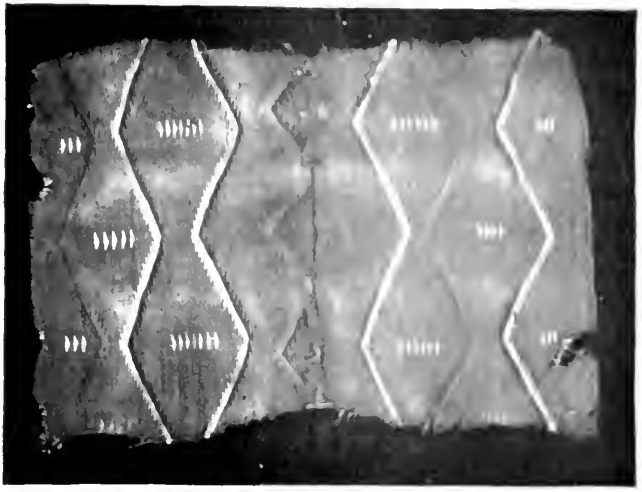


"EACH INDIVIDUAL SPECIMEN IS A HUMAN DOCUMENT"



THE MAKING OF A NAVAJO BLANKET

By George H. Pepper

Illustrated from Photographs.

DELICATE in texture, exquisite in design, wonderful in construction, the textiles of the ancient Peruvians stand alone in the arts of the New World, and are comparable with any of the archaic loom-work of the Orient. But the old Peruvians, though past-masters in the art of weaving, were not alone in their vocation. The old Nahuas, the Mayas, and other tribes of Mexico and Central America, well knew the possibilities of the loom, and from the evidence at hand we are safe in saying that the prehistoric sedentary people of our own Southwest were also textile-makers of no small merit. But of their descendants we cannot say as much, for the modern Pueblo Indians weave only the most simple form of blankets.

While the Pueblo people lived in peace in a land of comparative plenty, their aesthetic arts improved; but when the bands of Apaches and Navajos swept down upon them there came a change, and a decadence began which was increased by the Spanish conquest and afterward by the successive inroads of white adventurers and settlers. The Navajos were hunters who levied tribute upon their agricultural neighbors, and when later the Spaniards appeared and brought new game, these nomads helped themselves most freely, especially to the sheep. The Navajo seemed naturally adapted to the life of a herdsman, and the horse at once became his friend and ally, while the increasing flocks of sheep, at first stolen for food, were cared for by the squaws. Now, when the Navajo saw the wonderful trappings of Coronado's army, he was, no doubt, impressed by the fabrics worn by the soldiers and the blankets in which they slept at night, and began to realize the full import of the work already known to him. At all events, he conceived a desire to weave, and this he did, utilizing native implements and foreign material. The loom-sticks he either borrowed or copied from the Pueblos, and then by ravelling a very hard-twist Spanish cloth, known as "vayeta," he rewove it and made the "Serape Navaho" of the old traders and explorers. It seems quite evident that the Navajos learned their art from the Pueblos, but from the evidence obtainable they did not put their knowledge to any use until after the conquest; then a great many years must have elapsed before the next step was taken,

and the wool from the sheep made to take the place of the high-priced material from which they obtained their woof. Once begun, however, it presented unlimited possibilities, and the quick-witted nomad seemed to grasp the situation. He worked arduously, and though he appropriated the Spaniard's sheep, the only tools that he borrowed from him were the shears and wool-cards. With the old primitive distaff and Pueblo loom he spun links of wool, forming a chain of such exceeding length that, when his country was absorbed by our great Union, it reached the seat of government, and thousands of sheep were added to his flocks through the generosity of his foster fathers. This assistance was well directed, and the result is self-evident, for there are few who have not seen or at least heard of a Navajo blanket.

But how many realize the amount of labor involved in preparing the crude wool as it is taken from the sheep, and converting it into a twine that is thin enough and strong enough for the warp-strands of their work? Who but the initiated, in looking upon their beautiful designs, are impressed with the fact that they are viewing an evidence of individuality? It is not machine work, where each thread is counted by a complicated mechanism, and where each design is mathematically perfect; the forms and figures are evolved while the work is in progress, and drawn in their entirety upon the kaleidoscopic mirror of the mind alone. If it is new to you, my reader, you would, no doubt, like to see the squaw as she labors faithfully from the initial stages of the work until it is ready to adorn her own hogan or be sold to a neighboring Pueblo or trader. Let us journey, then, westward to a broad ancient waterway in northwestern New Mexico, known as Chaco Cañon, and find there the Navajo at home; not on the reservation set apart for him by the authorities in Washington, but in one of the grazing areas that he has preëmpted for the immediate needs of his hungry flocks.

We have not far to go to see the blanket-makers, for some of the older ones are usually near camp; not begging, but earnestly hoping that they will be invited to partake of what is left after the meal—a cup of coffee at least, which is to them not

"HER WRINKLED, TIME-WORN, ELEMENT-SCARRED FACE BEARS MUTE EVIDENCE TO THE YEARS OF WORK THAT SHE HAS SEEN."

"THE HOGAN, OR HOUSE, GENERALLY CONSISTS OF A FEW TREES DRIVEN INTO THE GROUND TO FORM A SEMICIRCLE. THE TOP IS COVERED WITH BRUSH OR A BLANKET, BUT OFTEN . . . AN ARROYO-BENCH . . . FORMS THE BACK PART OF THE HOUSE."

merely a luxury, but as essential as the so-called "staff of life." One of these old veteran weavers is shown in the illustration, and her wrinkled, time-worn, element-scarred face bears mute evidence to the years of work that she has seen. Practically all of the blankets are made by the squaws, both old and young, the few men who do the squaw's work making the exception that proves the rule. The squaw cares for the sheep, which are moved in large flocks from pasture to pasture, and great foresight must be exercised in preparing for the future needs of their charges, both in the way of new pastures and also in regard to a sufficient supply of water. The squaw also shears the sheep, and carries the wool to camp; though the latter part of the work sometimes falls to the lot of a burro or a pony. The summer camp is placed in the most convenient place, and the hogan, or house, generally consists of a few trees driven into the ground to form a semicircle. The top is covered with brush or a blanket, but often, as in the accompanying picture, an arroyo-bench is selected, a part of which forms the back part of the house. In these rough shelters the blanket work is carried on.

In the preparatory stages of the work the first operation is the shearing of the

"WHEN THE WORK OF DYEING IS COMPLETED, THE WOOL IS PULLED APART AND PLACED ON THE WOOL-CARDS . . . WITH THESE CARDS THE WOOL IS PREPARED FOR THE SPINDLES."

sheep. The animal is caught, thrown upon its side and hog-tied; that is, the four legs are crossed and bound securely with a piece of wool-rope, and then, with an occasional bleat of protest, the sheep is relieved of its coat. The great shearing-time is in the spring and fall, but sheep are sometimes sheared during the summer months.

Occasionally the fleece is taken off in one large piece, as shown in the illustration on page 37, and the rough parts and ends are removed and put aside for the coarser saddle-pads, experience having taught them that it is not policy to utilize the second-grade material in the construction of a good blanket. The white wool is not clean, as a rule, and does not stand out as it should when combined with black and other dark colors. The scarcity of water and the absence of sheep-dips are, of course, responsible for this state of affairs; nevertheless we have succeeded in inducing a few of the squaws to wash the wool, both black and white, and the portion that is to be dyed as well as that which is to be utilized in the natural state. When washed the wool is placed on the grease-wood bushes to dry, after which it is ready for the dyeing process.

Most of the Navajo sheep are white, but black ones are not uncommon. This gives the Indian two natural contrasts in color, with numerous shades of black and brown, while the wool of some sheep assumes almost a blue color. Occasionally all of these products are used in their natural state, but the white wool is the only one that is used to any extent without being dyed. The black wool is never a jet black; it has a red tinge, and is seldom used without being treated with "El-gee'-ba-toh," their native black dye, or the now prevalent aniline dye of the trader.

The native dyes of the Navajos are few. The only one they were using in their wool-work when I first saw them, in 1896, was black, and even this was fast being replaced by the dyes from stores. There is a yellow-green dye that is used occasionally; it is made from the flowering tops of the rabbit-weed (*Bigeloria graveolens*). After the flower-stalks have boiled for several hours a native alum is added, the use of the latter being that of a mordant. It gives a variety of shades, and is really a good dye for wool-work. Their native red dye is still used for moccasins and buckskin in general,

but owing to the pale red color, the result when it is applied to wool, it is seldom used for that purpose. The preparation of the black dye requires both time and labor. First the leaves and twigs of the aromatic sumac (*Rhus aromatica*) are boiled for six hours, while the squaw grinds ferruginous ochre and burns it in an open frying-pan. When the ochre has changed to a red powder, piñon-gum is added and stirred constantly until it carbonizes and forms with the ochre a black powder, which is added to the liquid, thereby forming a permanent dye. It is, as Dr. Washington Matthew says, a regular ink, "the tannic acid of the sumac combining with the sesquioxide of iron in the roasted ochre, the whole enriched by the carbon of the calcined gum." This liquid is used in dyeing buckskin, leather, and textiles, as well as the natural wool. Some of the old vayeta blankets have a very dark blue design, but this coloring material was not native, being the indigo that the Spaniards introduced, and which the Navajos have retained throughout the historic period. I have been told that they had, originally, a blue dye of their own, but I could find no one who knew how it was made. However, though we have only two purely primitive wool-dyes known to the present blanket-makers, the variants of the yellow-green dye afford them a number of different shades, ranging from a canary-yellow to an olive-green.

When the work of dyeing is completed, the wool is pulled apart and placed on the wool-cards. These "cards" are of American manufacture. They are thin rectangular pieces of wood with handles, one side being covered with a strip of leather containing fine wire teeth. With these cards the wool is prepared for the spindles. In the process the fibres are made to lie in the same general direction, so that the finished piece is of uniform thickness, and forms a strip about four inches wide and seven inches in length. This strip is taken by the squaw and wound upon a distaff of primitive form this first process of spinning being a lengthening and twisting of the wool. The illustration on page 38 shows this. The distaff used by the Navajos is

"OCCASIONALLY THE FLEECE IS TAKEN OFF IN ONE LARGE PIECE, . . . AND THE ROUGH PARTS AND ENDS ARE REMOVED AND PUT ASIDE FOR THE COARSER SADDLE-PADS."

"THE FIBRES ARE MADE TO LIE IN THE SAME GENERAL DIRECTION, SO THAT THE FINISHED PIECE IS OF UNIFORM THICKNESS, AND FORMS A STRIP ABOUT FOUR INCHES WIDE AND SEVEN INCHES IN LENGTH. THIS STRIP IS TAKEN BY THE SQUAW AND WOUND UPON A DISTAFF OF PRIMITIVE FORM—THIS FIRST PROCESS OF SPINNING BEING A LENGTHENING AND TWISTING OF THE WOOL."

practically the same as that used by the ancient Pueblo people, the only difference being in the size and shape of the whorl, the one shown in the accompanying photograph being a flat circular piece, whereas most of the old ones were thicker and much smaller. The position in which the distaff is held and the manner of manipulation vary in different tribes. While the Moquis roll the distaff along the leg, using the flattened fingers and part of the palm, and the Peruvians twirl their thin needle-like pieces into the air and deftly catch them as they return, the Navajos rest the upper part of the implement against the leg, and revolve it with a twirling motion of the thumb and fingers, the lower end resting on the ground. But among all tribes where the primitive form of spinning is retained the work is long and tedious.

The second step in the spinning is the unwinding and twisting of the loose strand, which leaves it in an almost hopeless mass of kinks and snarls, but in the third step these are all straightened out when the skein is returned to the distaff; it has now become more like a fluffy cord than when it was lying in a heap. Many times must the patient squaw wind and unwind, stretch and twist, ere she may put it aside as the finished woof-strand. Even then the spinning has but begun; another lot must be worked in the same way, and even more carefully than the first, for when the woof-size is reached the work is only half done. At this point great care must be exerted to keep the strand uniform; for it is to be the warp, or framework, on which the blanket is to be built. Harder and tighter she twists it until, after long hours of toil, she produces a strong, kinky, bristling twine whose little filaments will hold the woof-strands in a vise-like grip as the weaving progresses.

After the spinning process two small trees, or poles, are obtained, and to these the blanket-sticks are tied, usually with native wool-rope. These sticks are generally old ones that have been used for years, and the squaws become so attached to them that when a bargain is being made for a loom it is very difficult to persuade a blanket-maker to part with this particular part of

her outfit. After the loom-sticks are adjusted, and the loom is placed in a horizontal position, the sticks are wound with a rather coarse wool-cord, and through each loop is passed a twisted cord, which is to form the ends of the finished blanket. The warp-strand is next strung from pole to pole (as shown on this page) across the rectangular space, the loop at either end passing through a twist of the cord already mentioned, which lies along the inner side of the pole. When enough warp has been strung a twisted wool-cord is stretched near the outer cord at either side, and the loom is then raised to a perpendicular position and set up in the hogan. The uprights are firmly imbedded in the ground, and the loom is then apparently ready for work; but there is one other essential that shows the ingenuity of the Indian, for evidently realizing that the mere matter of tying the lower loom-sticks to the uprights would not insure rigidity, since the work would tend to loosen the knots and the warp-strands would be more or less loose as a result, she proceeded to dig directly under the loom-sticks three holes large enough and deep enough to receive heavy stones. These holes were placed at either end and under the middle of the lower loom-pole, while to the stones suspended in the holes cords from these ends were fastened, thereby keeping the warp-strands uniformly taut, and leaving the loom ready in every way for the blanket-work, as shown on page 40.

The skeleton has now been made, the framework upon which the blanket is to be built.

The squaw must next consider what kind of a blanket is to be made, for upon her decision will depend the arrangement of the healds, which are shown in the lower part of the picture. These healds are made by knotting a cord about a long twig, each loop of which encloses a warp-strand. The heald is made in such a way that it may be readily moved, its work being the separation of the strands. In simple, solid color-work one or more slender twigs are used in connection with the heald, one of which may be seen below and another above it in the plate.

The first and most essential tool to be used is the batten, or Bay-heck-kin-klish', with which the squaw separates the warp-

"AFTER THE SPINNING PROCESS . . . THE WARP-STRAND IS NEXT STRUNG FROM POLE TO POLE . . . ACROSS THE RECTANGULAR SPACE."

strands for the passage of the shuttle and pounds down the woof-strands when they have been placed in position. Generally it is a piece of scrub-oak, three feet long, three inches wide, and half an inch thick, boat-shaped at the ends, with thin edges. The manner in which this tool is handled,

"THE LOOM READY IN EVERY WAY FOR THE BLANKET WORK."

or rather the energy with which it is used, regulates, to a great degree, the hardness, and therefore the firmness of the blanket. When a hard, fine blanket is to be made, the warp-strands are closely strung, and the woof passed through and pulled taut before it is pounded into place by the repeated blows of the batten. On the other hand, when a saddle-pad or other loosely woven blanket is to be made, the wool is passed through loosely and pressed into place with a little implement called a "Payttsoy," a combination of a comb and an awl, the awl serving to loosen any part that may prove to be uneven after the irregular distribution of the loosely spun woof. The wool is then patted gently with the batten to equalize the irregularities and prepare an even surface for the next cross-section.

As most of the Navajo blankets are a combination of designs, there is very little use for a shuttle, hence there is no specialized form of this implement. When solid color-work is to be done a twig of greasewood serves the purpose admirably. The wool is wound back and forth as a boy winds kite-cord, and only enough to finish the solid portion in course of construction at the time. As the bulk of the work is in the form of designs, the wool for each figure is made into a little ball, or, should the design be a small one, the wool-strand is allowed to hang from its position, as shown on page 41. The number of these pendent strands depends, of course, upon the number of designs on a given level and the number of colors that are being used in each figure, but occasionally as many as twenty or thirty strands may be seen, and at such times the swiftness with which the numerous pieces are manipulated is really marvellous. For determining the length of the different figures in the more simple designs, the squaw sometimes ties a cord around the warp-strands that are to be included; the accompanying plate shows this in three places. As each marginal woof-strand is added it is passed through a twist in the side cords before mentioned. I say marginal strand, for very often from five

to a dozen strands will be built up on one side before the other side is worked, so one may readily see that a uniform line is not always maintained. Work of this kind, although causing a very noticeable difference between handwork and mechanical figures, detracts from the aesthetic appearance of the finished product; and, as it seems to be attributable to nothing less than sheer laziness on the part of the squaw, it is being discouraged by those who are interested in the development of the art of the Navajos.

In making a blanket, the squaw always sits, building up the designs as far as she can reach; she then removes the lower loom-pole and forms a roll of the finished part of the blanket. The loom-pole is then fastened to the face of the blanket at a point just below the upper line of the woof. Here a fold is made, and through the double section thus formed the coarse wool-cord is sewed, each stitch of which passes under the cord of the loom-pole. The whole blanket is now lowered, the three stone weights adjusted, and the work is resumed.

In examining the work of the Navajos, heavy ridges are very often noticeable, so that at times it almost seems that two sections have been sewed together, but closer scrutiny shows that the piece is entire. It requires years of constant use to obliterate these peculiar loom-marks. When the blanket is nearly completed very thin and narrow battens, or pounding sticks, are used, and the strands are finally pressed into place with long needles of wood which are used in connection with the little comb. Carefully the last strands are pounded home—no shirking at this stage of the work. One by one they are woven in and out until at last no space remains, and the labors of the weaver are at an end.

Thus the blanket is rolled and sewed and the loom lowered; step by step it is evolved from the crude wool, until at last it stands before us a thing of beauty, the material a—

"THE WOOL IS WOUND BACK AND FORTH AS A BOY WINDS KITE CORD AS THE BULK OF THE WORK IS IN THE FORM OF DESIGNS, [illegible] THE DESIGN BE A SMALL ONE, THE WOOL-STRAND IS A LONG ONE HANG FROM ITS POSITION."

free from padding as the work was at one time free from the influence of civilization. But our prosaic natures fail to realize that each individual specimen is a human document.

In the rush and turmoil of our busy life we do not think of the story that is woven into those ever-changing strands, nor of the

"ONE OF THE MOST WONDERFUL PIECES OF DESIGN WORK THAT THE NAVAJOS HAVE EVER PRODUCED. . . . THE DESIGNS AND THE GENERAL ENSEMBLE ARE PRICELESS TO THE STUDENT, BUT TO COMPARE THE STORE WOOF WITH THE PRIMITIVE FORM WOULD BE A FARCE."

tales of woe and suffering that those bright and gaudy colors have beheld. But could that lifeless form be given speech, it could tell of days of adverse fortune when the sandstorms held mad revel, and the household goods were piled about it to keep it clean, while its owner sought the friendly shelter of a neighboring rock. Or it might speak of nights when all was dark, when waters dashed in torrents through the roofless hogan, causing squaws to bare their shoulders to the elements while their blankets shielded it from harm. How many instances of suffering might be cited — patient cripples, weak and emaciated men and women, feeble with age and exposure, subsisting on corn and water, watching day by day the progress of the blanket whose completion will mean coffee and a few of the luxuries that we would class as necessities! Then the blanket is finished and the journey to the trading store begins. The squaw knows from experience what she should receive for her work, and therefore demands a certain amount as her just dues. The trader, hard-hearted and grasping, as a rule, takes from his money-pouch perhaps one-half the blanket's value in silver and throws it upon the counter. The squaw realizes the injustice of the act, but also knows full well that there is but one alternative, and that is to ride perhaps a score of miles to the next store, and that, too, without the slightest prospect of better treatment when she reaches it. Then comes the thought of the anxious ones at home, and she realizes how great will be the disappointment if she returns empty-handed. Long she ponders, then conquering the ever-increasing anger that threatens to gain the mastery over reason, she takes the proffered coin. She is able to buy but half the goods that she had hoped to get, and the trader realizes from one hundred to three hundred per cent. on each article that she buys.

Thus it has been for many years, but I am glad that I am able to say that a new *régime* has begun which promises to give the Navajo not only an honest equivalent for his work, but also a helping hand in each and all of the various ways that tend to elevate and cause a betterment in his physical and financial status.

On page 43 we have a reproduction of one of the purely primitive blankets. It is a small rug made entirely from natural native products. In this form of blanket we have the result of recent training. The wool has been washed and the natural colors have been utilized; these consist of a black and a yellow-brown, forming a design on a white background. It not only does away with the dyes of the white man, but the effect is pleasing to the eye, for the colors are very soft and harmonize perfectly. The blanket under consideration was made for the writer during the summer of 1898, when the work of the Hyde Exploring Expedition among the Navajos, begun in 1896, was bearing fruit. But the reclaiming of the Indian's art proved to be a task that necessitated untiring labor with results hardly sufficient to repay one for the time and money expended. Unforeseen obstacles were constantly encountered. The Indian had been moving in a certain groove for years, and did not appreciate innovations that tended to disrupt the work that had been brought about by the traders.

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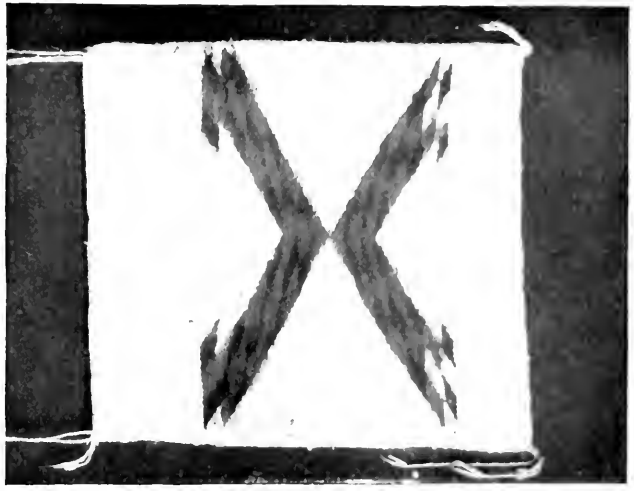
One of the greatest evils with which we had to cope was the use of white store cord, which was rapidly replacing the native warp. With the machine-made cord for the warp the labor of blanket work was greatly reduced. Blankets could be made more rapidly, and the trader seldom made a difference in the price of the finished article. Then the hideous purples and greens were introduced to swell the great list of alien dyes. Some of the combinations consequent upon this step affected even the apathetic trader, to say nothing of the retailers in the cities. They were obliged to refuse any and all blankets that contained designs in purple. Thus public opinion will tend to crush an evil when it passes beyond the bounds of æsthetic endurance.

There is another grievance that must be laid at the door of the trader. Not satisfied with his innovations of aniline colors and animals galore, both of which run at will across the fields of blankets that should not be profaned by such intrusions, he gave the Indians yarn from the factories that have made the city of Germantown famous. At first he gave them warp, as we have seen; then, to make the product still more modernized, he furnished them with a ready-made woof. What an easy time for the Indian—no shearing, no bother at all with the crude wool, no tedious spinning, no dyeing; nothing to do, in fact, but the actual weaving! A saving of labor to the Indian, 'tis true, but oh, how much the beauty and artistic merit of their work has suffered! Where are the variants in color values that give their dye work such a charm? Where is the rough, uneven surface with its warmth of blended fibres? Where is that inexplainable something that draws us with an irresistible desire to the native work? All have vanished, and we behold in the Germantown blanket a textile not truly Indian, but merely an exhibition of his abilities as a weaver.

The blanket shown on page 42 is one of the most wonderful pieces of design work that the Navajos have ever produced. The ancient cloud terraces with the zigzag lightning and the esoteric designs of the priesthood have a charm and a value that are immeasurable; but how much more interesting it would have been and how much greater the degree of ethnic importance had they but made it from their native wool, to say nothing of the pleasant associations of such a work! The designs and the general ensemble are priceless to the student, but to compare the store woof with the primitive form would be a farce.



"IT IS A SMALL RUG MADE ENTIRELY FROM NATURAL NATIVE PRODUCTS. IN THIS FORM OF BLANKET WE HAVE THE RESULT OF RECENT TRAINING. THE WOOL HAS BEEN WASHED AND THE NATURAL COLORS HAVE BEEN UTILIZED; THESE CONSIST OF A BLACK AND A YELLOW-BROWN, FORMING A DESIGN ON A WHITE BACKGROUND."

If we care naught for the primitive work, if the desire is to perfect the Indian's textile arts along the lines of modern thought, then the sooner we introduce the proper machinery the better. But God forbid that such a day should ever dawn. May the sun never rise upon the Navajo and behold him in more modernized condition in his blanket work than at the present time. On the contrary, let us hope that the efforts that are now on foot may grow to such proportions that the modern influence may be swept away completely, and primitive ideas and primitive work be once more the dominant factor in his weaving industries.

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